



BOOK BOX LAMP

Fall Semester - 2023

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Survey of Engineering Graphics

Lamp Project

Contents:

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Inspiration

- Initially, I wanted to do a classic lamp inspired by the movie "Treasure Island"
- This transitioned to a lamp inspired by a variety of books/tv shows/movies
- To highlight my favorite aspects, I wanted to do an adapted shadow box lamp
- I decided to make a rectangular prism with each side representative of different books, with two adapted into movies and one a show



Inspiration

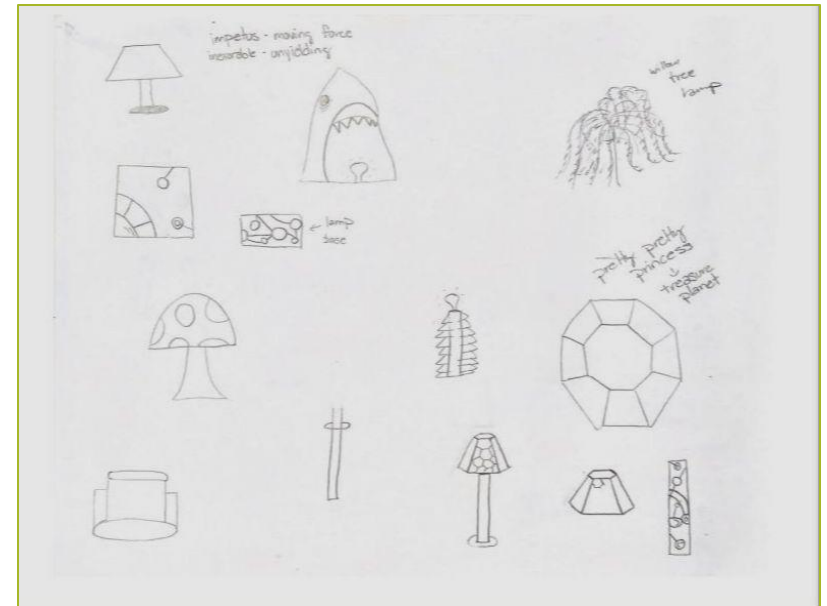


The four sides are inspired by "The Cruel Prince" by Holly Black, "The Hunger Games" by Suzanne Collins, "The Last Unicorn" by Peter S. Beagle and "Game of Thrones" by George R.R. Martin

Design Process

- Starting with the four sides for four books, I found pictures online that matched what I envisioned, either a book cover, a still from the show/movie, or a page from the book, and traced them on AutoCAD
- With some trial-and-error laser cutting, as the CNC was not specific enough for my sketches, I modified the AutoCAD file, so all elements lasered out remained attached to the wood

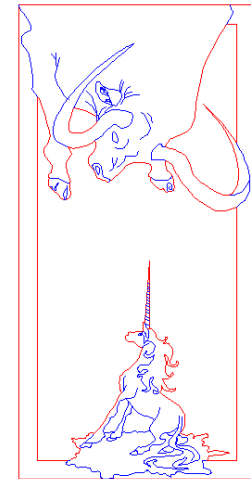
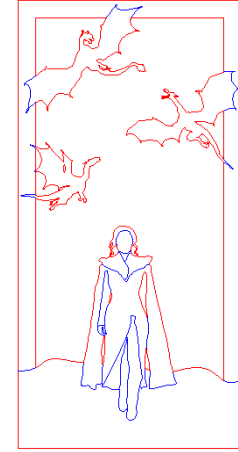
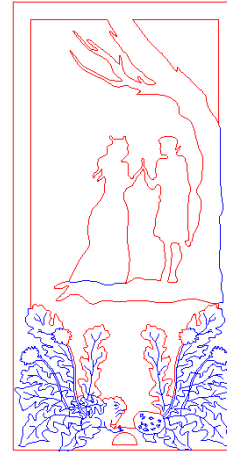
Sketches



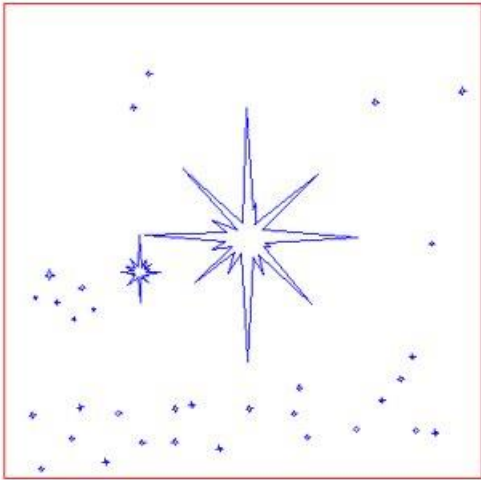
12/11/2023

AutoCAD Files

- Each image represents a separate side of the lamp



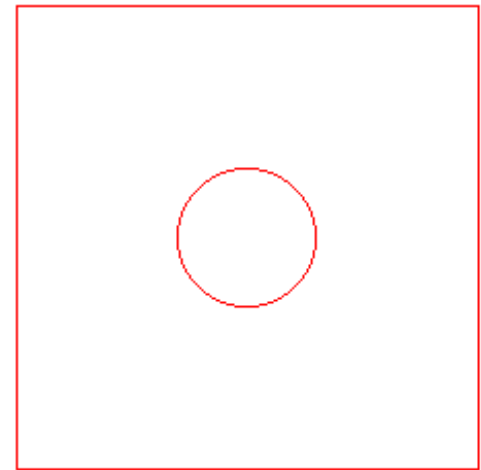
Lamp Roof



Lamp Bottom



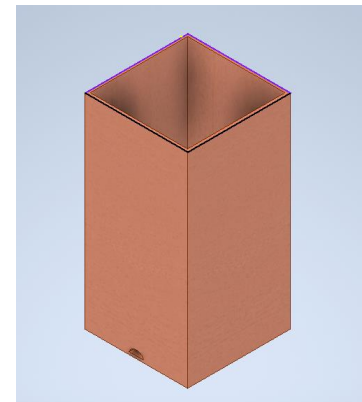
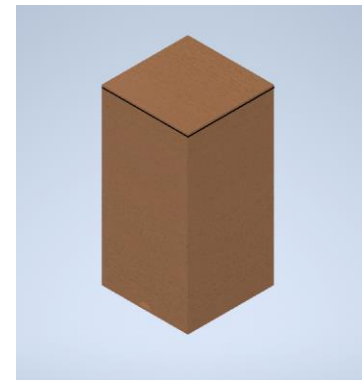
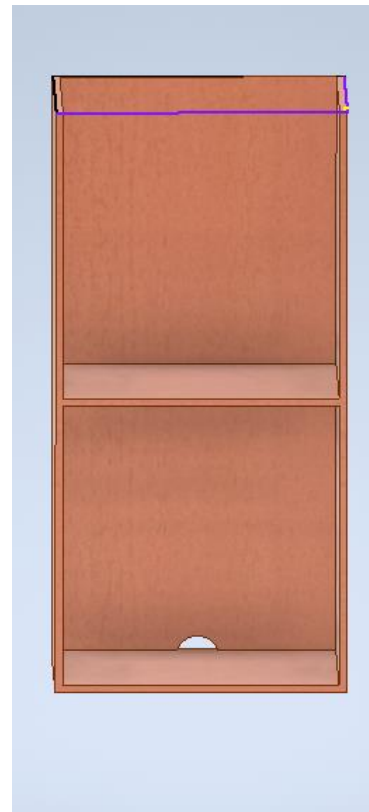
Lightbulb Holder

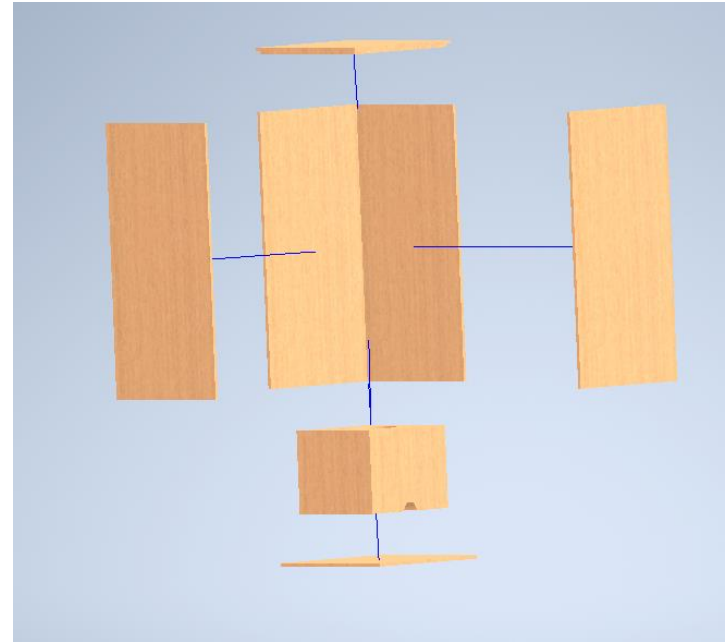
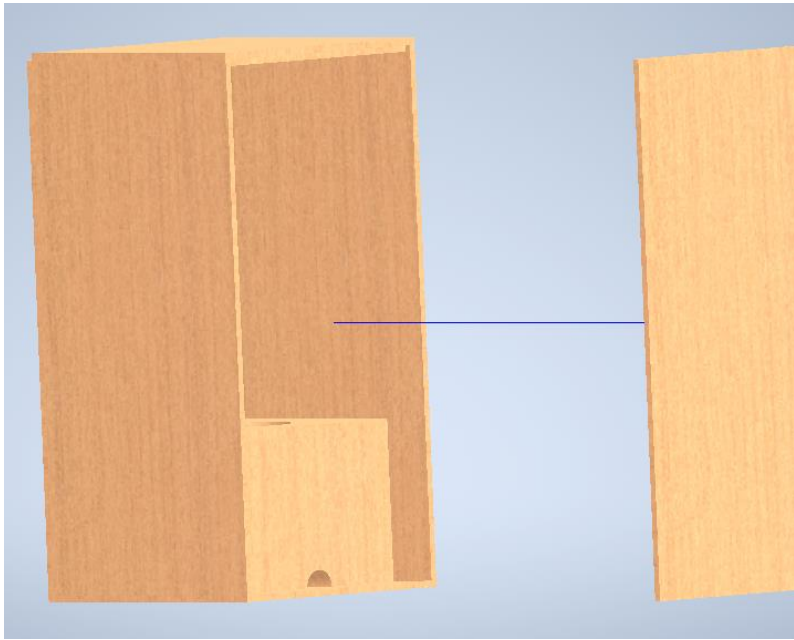


CAD FILES

Inventor files

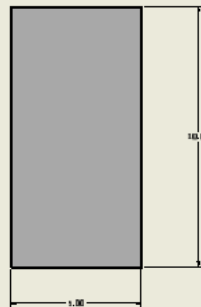
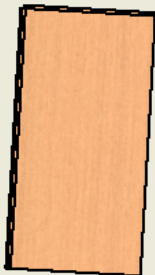
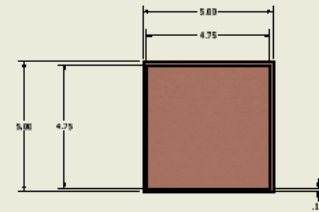
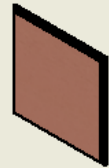
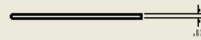
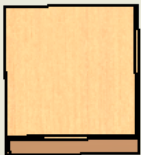
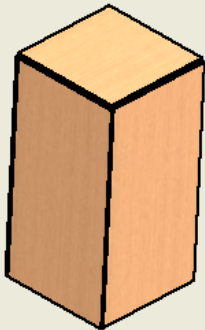
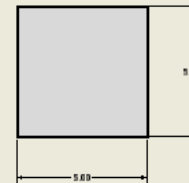
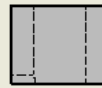
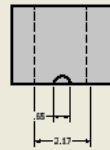
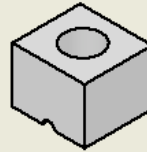
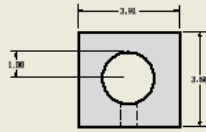
These files showcase the full box with a wood material that resembles the plywood I wanted to create the project out of



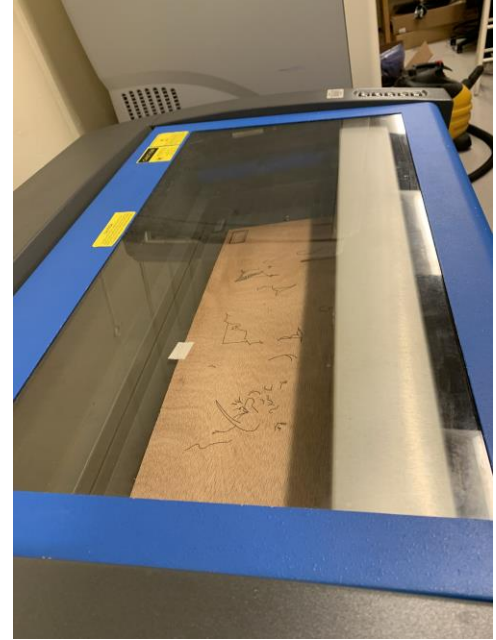


ASSEMBLY

PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	4	Part1	
2	1	amp bottom	
3	1	amp inside	
4	1	lamp roof	



DATE	11/27/2023	TITLE	
DESIGNED BY		DRAWN BY	
CHECKED BY		DATE	
APPROVED BY		REV	DESCRIPTION
		D	box assembly
		SCALE	1/2" = 1"
		SHEET 1 of 1	



PHOTOS OF PROCESS



FINAL PRODUCT



FINAL PRODUCT

(2) SHEETS OF 1/8" PLYWOOD

(1) lightbulb

(1) lamp cord

(1) package of sandpaper

(1) container of spray adhesive

(1) container of wood glue

(1) roll of linen

MATERIALS LIST

Material Cost Calculation

Material	Cost
(2) sheets of 1/8" plywood	\$15 each; \$30 total
(1) lightbulb	\$.95
(1) lamp cord	\$5.33
(1) package of sandpaper	\$5
(1) container of spray adhesive	\$10
(1) container of wood glue	\$3.59
(1) roll of linen	\$22.95
TOTAL:	\$77.82

Labor Time

Design Time:	4 hours
AutoCAD/Inventor:	10 hours
Material Planning:	2 hours
Sanding:	1 hours
Gluing	5 hours
Lasor Cutter Time:	5 hours
TOTAL:	27 HOURS

Total Cost Calculation

Lasor Cutter:	5 hours x \$40 = \$200
Labor Cost:	27 hours x \$45 = \$1,215
Material Cost:	\$77.82
TOTAL COST:	\$1,492.82

Reflection

Throughout this experience, I learned many useful skills and greatly improved my AutoCAD and Inventor knowledge. I have been able to better understand how materials relate to each other and the best ways to adhere them together. If I were to do this project again, I would stain or spray paint my wood after noticing how well it turned out for my classmates. Even though this experience proved difficult at times, it was overall very rewarding.